STATE OF CALIFORNIA

ENVIRONMENTAL PROTECTION AGENCY

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of: Santa Susana Field Laboratory Simi Hills Ventura County, California CAD000629972 (Boeing/DOE) CA3890090001 (Boeing/DOE) The United States Department of Energy (Respondent)	))))))))))	Docket No. **HSA-CO 10/11 - 037** ADMINISTRATIVE ORDER ON CONSENT FOR REMEDIAL ACTION Health and Safety Code Sections 25355.5(a)(1)(B), 58009 and 58010

1.0. INTRODUCTION

1.1. Parties. The California Department of Toxic Substances Control ("DTSC") and the United States Department of Energy, a federal agency ("DOE" or "Respondent") (collectively "The Parties") enter into the following Administrative Order on Consent ("Order").

1.2. Site. This Order applies to two portions of the Santa Susana Field Laboratory Site ("SSFL") known as Area IV and the Northern Buffer Zone, hereinafter referred to as the "Site." The entirety of SSFL is located in the Simi Hills in southeastern Ventura County, as shown in Attachment A. The Simi Hills are bordered to the east by the San Fernando Valley and to the north by the Simi Valley. The SSFL is located approximately three miles south of the San Fernando Valley Freeway (118) and approximately five miles north of the Ventura Freeway (101).

1.3. Authority of DTSC. DTSC issues this Order under the provisions of Section 25355.5(a)(1)(B) of the California Health and Safety Code, and pursuant to DTSC's general grant of authority in Sections 58009 and 58010 of the California Health and Safety Code.

1.4. Authority of the Respondent. DOE is entering into its obligations in this Order pursuant to its authority under the Atomic Energy Act, 42 U.S.C. §§ 2011 *et seq.*

1.5. Consent Order for Corrective Action (2007).

1.5.1. This Order shall not in any way operate to modify, amend or nullify the obligations of the Parties under the 2007 Consent Order for Corrective Action (Department Docket No. P3-07/08-003, hereinafter "2007 Order"), entered into by DTSC, DOE, the National Aeronautics and Space Administration ("NASA"), and The Boeing Company ("Boeing"). The purpose of this Order is to further define and make more specific DOE's obligations with respect to only the cleanup of soils at the Site. Compliance with and fulfillment of this Order shall, upon completion, satisfy DOE's responsibilities regarding soils at the Site and DOE's obligations and responsibilities in this Order supersede the 2007 Order requirements pertaining to soils cleanup. The 2007 Order requirements pertaining to DOE for soils contamination at the Site shall not be applied to DOE. All other provisions of the 2007 Order remain in effect as to DOE, including provisions relating to ground water contamination and soil vapor emanating from groundwater, and shall remain in full force and effect. All provisions of the 2007 Order applicable to NASA and Boeing are not affected by the provisions of this Order in any way.

1.5.2. With respect to groundwater, utilizing the authority of this Order, the procedures of the 2007 Order will be applied to the investigation, characterization and remediation of any radiological contaminants that may have impacted groundwater. The investigation, characterization and remediation of groundwater conducted under the procedures of the 2007 Order shall, to the extent practicable, be coordinated with activities conducted under this Order.

1.6. Compliance with State Law. DTSC agrees that compliance with this Order and the 2007 Order shall constitute DOE's full and complete compliance with all applicable provisions of Chapters 6.5 and 6.8 of Division 20 of the California Health and Safety Code (the California Hazardous Waste Control Law, Sections 25100 *et seq.* of that Code, and the California Hazardous Substances Account Act, Sections 25300 *et seq.* of that Code), including specifically, but not limited to, California Senate Bill 990 (Stats. 2007, c. 729), which has been codified as Section 25359.20 of the California Health and Safety Code, but only with respect to the application of these provisions to radiologic or chemical contamination of soil at the Site or any contiguous radiologic or chemical contamination of soil emanating from within Area IV or the Northern Buffer Zone, within or without the SSFL boundaries, identified by EPA in its radiologic characterization survey or by DTSC as part of the investigation of chemical contaminants.

1.7. Agreement in Principle. On September 3, 2010, the Parties agreed to a Joint Settlement Framework in a document entitled "Final Agreement in Principle" (AIP), which is incorporated as Attachment B. The Parties agree that DOE's cleanup

obligations with respect to soil contamination at the Site shall be conducted in accordance with and be governed by the AIP, as further defined in this Order.

1.8. Definition of Terms. In addition to the definition of terms in Section 1.4 of the 2007 Order, the following terms shall be defined as specified:

1.8.1. “Cleanup of soils” shall mean the cleanup of soils that contain chemical and/or radiological contaminants in or on soils above their respective cleanup standards as specified in the AIP. “Cleanup of soils” does not include the cleanup of volatile organic contaminants that are found in the groundwater or in the soil or bedrock below the groundwater level, nor does it include the cleanup of volatile organic contaminants that emanate from groundwater contaminated with volatile organic contaminants that migrate into and through the saturated and unsaturated soil and bedrock at the Site.

1.8.2. “Cleanup to Background Levels” means removal of soils contaminated above local background levels.

1.8.2.1. “Cleanup to Background Levels” shall include in situ or other onsite treatment of soils that is able to achieve the cleanup standards as specified in the AIP.

1.8.2.2. “Cleanup to Background Levels” does not include “leave in place” alternatives.

1.8.2.3. “Cleanup to Background Levels” does not include onsite burial or landfilling of contaminated soil.

1.8.3. “Detection Limits” means the following:

1.8.3.1. For chemical contaminants, “detection limit” means method reporting limit (or MRL), which is the lowest concentrations at which an analyte can be confidently

detected in a sample and its concentration can be reported with a reasonable degree of accuracy and precision.

1.8.3.2. For radiological contaminants, “detection limit” means minimum detectable activity (or MDA), which is defined as the smallest amount of activity that can be quantified for comparison with regulatory limits.

1.8.4. “Soils” shall mean saturated and unsaturated soil, sediment, and weathered bedrock, debris, structures, and other anthropogenic materials. “Soils” does not include surface water, groundwater, air, or biota.

2.0. WORK TO BE PERFORMED

2.1. Remediation Standard. The cleanup of soils at the Site shall result in the end state of the Site after cleanup being consistent with “background” (*i.e.*, at the completion of the cleanup, no contaminants shall remain in the soil above local background levels, with the exception of the exercise of the exemptions that are specifically expressed in the AIP). All response actions taken pursuant to this Order shall be performed so as to achieve this standard, in full compliance with the terms and conditions detailed in the AIP, in accordance with workplans that have been submitted to and approved by DTSC, and focused on those areas where U.S.EPA, in the course of conducting its radiological characterization survey, has determined that onsite radiological contaminant levels, or offsite areas of contiguous contamination that emanates from within the Site, exceed local background levels and where DTSC, in the course of overseeing and approving the chemical contaminant investigation work, has

determined that onsite chemical contaminant levels, or offsite areas of contiguous contamination that emanates from within the Site, exceed local background levels.

2.2. Investigation and Remediation Areas. As a result of previously conducted assessments performed under the authority of the Resource Conservation and Recovery Act (RCRA) and the State Hazardous Waste Control Law, the Site has been divided into areas separately and uniquely named. The activities being conducted under the provisions of this Order are being conducted under the requirements in Chapter 6.8 of the California Health and Safety Code. However, the names of those areas and the geographic descriptions and boundaries of those areas are to be retained for the sake of continuity.

(a) RFI Group 5

(b) RFI Group 6

(c) RFI Group 7

(d) RFI Group 8

(e) Northern Buffer Zone

Some of these RFI Group areas may contain areas outside of the Site. For purposes of this Order, except as provided in the AIP (which describes DOE's commitment to remediate the areal extent of any contiguous radiologic or chemical contamination of soil that emanates from within the Site), DOE's responsibilities regarding these RFI groups are limited to only those areas of the RFI Groups that are within the Site.

2.3. Building Demolition Activities

2.3.1. Within 30 days of receiving relief from the terms of the judgment in United States District Court for the Northern District of California entitled *Natural Resources*

Defense Council, Inc., Committee to Bridge the Gap, and City of Los Angeles v. Department of Energy, et al. ("NRDC v. DOE"), Case No. C-04-04448 SC, so as to allow the work under this Order to be performed, as described in Section 6.0 of this Order, DOE shall submit to DTSC for its review and approval a demolition plan, demolition schedule and detailed procedure that describe the activities that DOE shall perform to sample and characterize DOE's remaining buildings to determine whether they are contaminated with radiological or chemical contaminants, and to determine appropriate handling methods for managing and disposing of demolition debris. DOE shall request U.S. EPA's assistance in reviewing the procedures for the assessment of the structures and debris for radiological contaminants.

2.3.2. DOE shall make every effort to gain The Boeing Company's cooperation and approval in removing the buildings at the Site that remain under the ownership and control of The Boeing Company.

2.3.3. To the extent DOE is unable to remove, or arrange with Boeing to remove, the buildings at the Site that remain under the ownership and control of Boeing , DOE's obligations under this Order related to soils beneath those buildings shall be stayed, and DOE shall retain the responsibilities for the soils beneath those buildings that are described in this Order until such time as the buildings have been removed and the soils beneath them can be accessed, assessed and remediated as necessary.

2.4. Radiological Investigation Activities. U.S. EPA is conducting a Radiological Background Study and a Radiological Characterization Survey of the Site as part of the activities it is conducting pursuant to HR 2764, P.L. 110-161, work which is being funded pursuant to an Interagency Agreement entered between DOE and U.S. EPA.

The result of U.S.EPA's efforts will be a report on the presence of radiological contamination at the Site. Nothing in this Order is intended to modify or amend the activities that are being conducted by U.S. EPA under that Interagency Agreement. As part of its survey and characterization efforts, U.S. EPA will be conducting sampling of soil and other environmental media in accordance with the project plan and description prepared by the U.S. EPA.

2.5. Chemical Investigation Activities

2.5.1. Phase 1: Co-Located Samples. In conjunction with samples collected by U.S. EPA for radiological analyses during its first phase of sampling, at every location where U.S. EPA collects a sample for radiological analyses, DOE shall cause to be taken a similar sample from the same or proximate locations. Those samples shall be provided to DTSC or its designee, and DTSC or its designee shall submit the samples for necessary chemical analyses.

2.5.2. Phase 2: Co-Located Samples from Random Locations. In conjunction with samples collected from randomly selected locations by U.S. EPA for radiological analyses during its second phase of sampling, at every location where U.S. EPA collects a random sample for radiological analyses, DOE shall cause to be taken a similar sample from the same or proximate locations. Those samples shall be provided to DTSC or its designee, and DTSC or its designee shall submit the samples for necessary chemical analyses.

2.5.3. Phase 3. Chemical Data Gap Investigation.

2.5.3.1. Schedule for Chemical Data Gap Investigation. Within 30 days of the completion of the activities described in Sections 2.4 and 2.5.1 and 2.5.2, DOE shall

submit to DTSC a schedule for the completion of a Chemical Data Gap Investigation. The Chemical Data Gap Investigation may be conducted in one or more phases to focus sampling efforts and increase the efficiency of the investigation. DOE shall make every effort to complete its Chemical Data Gap Investigation and produce the Chemical Data Summary described in Section 2.7 at the same time that U.S. EPA delivers the results of its radiological survey and characterization efforts.

2.5.3.2. Chemical Data Gap Scoping. Prior to the preparation of a Chemical Data Gap Investigation Workplan, DOE and DTSC shall meet to determine the scope of the Chemical Data Gap Investigation. In determining the scope, DOE and DTSC shall evaluate the results from the Phase 1 Co-Located sampling effort, the results from the Phase 2 Co-Located sampling effort, the results of U.S EPA's radiological survey and characterization efforts, the data and information presented in the previously submitted RFI reports and RFI workplans, and any available historical Site data. This scoping effort shall be used to determine the locations at the Site where insufficient chemical data exists and additional chemical investigation is necessary.

2.5.3.3. Chemical Data Gap Investigation Workplan. Based on the Chemical Data Gap Scoping in Section 2.5.3.2, DOE shall prepare and submit to DTSC for its review and approval a detailed Chemical Data Gap Investigation Workplan.

2.5.3.4. To the extent that any of the activities described in Sections 2.4 and 2.5.1 and 2.5.2 are completed for any area within the Site prior to the completion of the remainder of the activities described in Sections 2.4 and 2.5.1 and 2.5.2, for the entirety of the Site, DOE may propose to conduct Chemical Data Gap Investigation activities, and to prepare Chemical Data Gap Investigation Workplan(s), for specific areas within

the Site, rather than a single, encompassing Chemical Data Gap Investigation Workplan for the entire Site.

2.5.3.5. Chemical Data Gap Investigation Workplan Implementation. Upon DTSC's approval, DOE shall implement the approved Chemical Data Gap Investigation Workplan under DTSC's oversight.

2.5.3.6. Chemical Data Gap Investigation Workplan Revisions. If DOE proposes to modify any methods or initiates new activities for which no Field Sampling Plan, Quality Assurance Project Plan, Health and Safety Plan or other necessary procedures/plans have been established, DOE shall prepare an addendum to the approved plan(s) for DTSC review and approval prior to modifying the method or initiating new activities.

2.5.4. Any chemical investigation workplans prepared pursuant to section 2.5 shall include the following components:

2.5.4.1. Field Sampling Plan. A Field Sampling Plan shall include:

(1) Sampling objectives, including a brief description of data gaps and how the field sampling plan is to address these gaps;

(2) Sample locations, including a map showing these locations, and proposed sampling frequency;

(3) Sample designation or numbering system;

(4) Detailed specification of sampling equipment and procedures;

(5) Sample handling and analysis including preservation methods, shipping requirements and holding times; and

(6) Management plan for wastes generated.

2.5.4.2. Quality Assurance Project Plan. A Quality Assurance Project Plan shall include:

(1) Project organization and responsibilities with respect to sampling and analysis;

(2) Quality assurance objectives for measurement including accuracy, precision, and method detection limits.

(3) Sampling procedures;

(4) Sample custody procedures and documentation;

(5) Field and laboratory calibration procedures;

(6) Analytical procedures;

(7) Laboratory to be used must be certified pursuant to Health and Safety Code section 25198;

(8) Specific routine procedures used to assess data (precision, accuracy and completeness) and response actions;

(9) Reporting procedure for measurement of system performance and data quality;

(10) Data management, data reduction, validation and reporting. Information shall be accessible to downloading into DTSC's computer system; and

(11) Internal quality control.

2.5.4.3. Health and Safety Plan. A Site-specific Health and Safety Plan shall be prepared in accordance with federal regulations (29 CFR 1910.120) and state regulations (Title 8 CCR Section 5192). This plan should include, at a minimum, the following elements:

(1) Site Background/History/Workplan;

(2) Key Personnel and Responsibilities

(3) Job Hazard Analysis/Summary;

(4) Employee Training;

(5) Personal Protection;

(6) Medical Surveillance;

(7) Air Surveillance;

(8) Site Control;

(9) Decontamination;

(10) Contingency Planning;

(11) Confined Space Operations;

(12) Spill Containment;

(13) Sanitation;

(14) Illumination; and

(15) Other applicable requirements based on the work to be performed.

All contractors and all subcontractors shall be given a copy of the Health and Safety Plan prior to entering the Site. Any supplemental health and safety plans prepared by any subcontractor shall also be prepared in accordance with the regulations and guidance identified above. The prime contractor shall be responsible for ensuring that all subcontractor supplemental health and safety plans shall follow these regulations and guidelines.

2.6. Treatability Studies. To the extent DOE considers the use of in situ or other onsite treatment technologies or methods to achieve the cleanup levels specified in the

AIP, DOE shall conduct treatability testing to develop data for assessing treatment in place that could achieve the cleanup goals. Treatability testing is required to demonstrate the implementability and effectiveness of such technologies, unless DOE can show DTSC that similar data, documentation or information exists. The required deliverables are: a workplan, a sampling and analysis plan, and a treatability evaluation report. To the extent practicable, treatability studies shall be proposed and implemented during the latter part of Chemical Data Gap investigation.

2.7. Chemical Data Summary Report. DOE shall prepare and submit a Chemical Data Summary Report to DTSC for review and approval in accordance with the approved Chemical Data Gap Investigation workplan schedule. The Chemical Data Summary Report shall contain a summary of the entirety of the data collection efforts, and shall include the horizontal and vertical extent of contamination in the soils at the Site that exceed background levels of chemical contaminants.

2.8. Feasibility Study. For purposes of this Order, DOE shall not be required to prepare or submit a Feasibility Study.

2.9. Soils Remedial Action Implementation Plan. No later than 60 days after DTSC approval of the Chemical Data Summary Report, DOE shall prepare and submit a draft Soils Remedial Action Implementation Plan to DTSC for review and approval. The draft Soils Remedial Action Implementation Plan shall be based on and summarize the approved Chemical Data Summary Report, U.S. EPA's radiologic characterization survey, and shall clearly describe the following:

1) A general description and history of the Site;
2) The nature and extent of radiological and chemical contamination at the Site;

3) The planned remedial action and its objectives;
4) Any areas proposed for the exercise of any of the exemptions specified in the AIP (Attachment B) from the background cleanup standards, and the rationale for their exemption;
5) Any areas proposed for in situ or onsite treatment to achieve the cleanup goals, including the results of treatability studies conducted pursuant to Section 2.6. The draft Soils Remedial Action Implementation Plan shall propose in situ or on site treatment options to the maximum extent possible in areas where in situ or on site treatment can be demonstrated to effectively achieve the cleanup goals;
6) All proposed mitigation measures necessary to address any identified environmental impacts; and
7) A schedule for implementation of the planned remedial actions. The schedule shall ensure that the identified activities can be accomplished by 2017 or sooner.

2.10. Soils Remedial Design. The Soils Remedial Action Implementation Plan shall also include Soils Remedial Design elements that detail the technical and operational plans for implementation of the Soils Remedial Action Implementation Plan. The Soils Remedial Design elements shall include the following, as applicable:

1) Description of equipment used to excavate, handle, and transport contaminated material;
2) A dust control and suppression plan that ensures the minimization of airborne dust generation during remedial activities, and an air monitoring plan that monitors the effectiveness of dust control and suppression efforts;
3) A transportation plan identifying routes of travel and final destination of wastes

generated and disposed, and a description of mitigation measures to be taken to address any identified environmental impacts due to transportation;

4) An updated health and safety plan addressing the implementation activities;
5) Identification of all necessary permits and agreements, and demonstration of the acquisition of those permits and agreements; and
6) A detailed schedule for implementation of the remedial action, including procurement, mobilization, construction phasing, sampling, facility startup, and testing.

2.11. Modification to Soils Remedial Action Implementation Plan. As a result of its review, and as necessary in response to comments received pursuant to the public review and comment period described in Section 3.0, DTSC may require changes to be made to the draft Soils Remedial Action Implementation Plan. DOE shall modify the draft Soils Remedial Action Implementation Plan in accordance with DTSC's specifications and submit a final Soils Remedial Action Implementation Plan within 60 days of receipt of DTSC's specified changes.

2.12. Confirmation Sampling. In accordance with the AIP (Attachment B), sampling to confirm that the required cleanup standard has been met shall be conducted by U.S.EPA and DTSC in accordance with the document "Confirmation Protocol; 'Not to Exceed'; Background Cleanup Standard for Soils," incorporated as Attachment C. In accordance with that protocol, sample collection and data analysis shall be consistent with field sampling plans and quality assurance/quality control plans for U.S. EPA's Radiological Background Study, DTSC's Chemical Background Study, and U.S. EPA's Radiological Study for Area IV/Northern Buffer Zone (NBZ).

2.13. Changes During Implementation. During the implementation of the final Soils Remedial Action Implementation Plan, DTSC may specify such additions, modifications, and revisions to the Soils Remedial Action Implementation Plan as DTSC deems necessary in order to carry out this Order.

2.14. Stop Work Order. In the event that DTSC determines that any activity (whether or not pursued in compliance with this Order) may pose an imminent or substantial endangerment to the health or safety of people on the Site or in the surrounding area or to the environment, DTSC may order DOE to stop further implementation of this Order for such period of time needed to abate the endangerment. In the event that DTSC determines that any Site activities (whether or not pursued in compliance with this Order) are proceeding without DTSC authorization, DTSC may order DOE to stop further implementation of this Order or activity for such period of time needed to obtain DTSC authorization, if such authorization is appropriate. Any deadline in this Order directly affected by a Stop Work Order, under this Section, shall be extended for the term of the Stop Work Order.

2.15. Emergency Response Action/Notification. In the event of any action or occurrence (such as a fire, earthquake, explosion, or human exposure to hazardous substances, as defined in section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601(14), caused by the release or threatened release of a hazardous substance) during the course of this Order, DOE shall immediately take all appropriate action to prevent, abate, or minimize such emergency, release, or immediate threat of release and shall immediately notify the Project Director. DOE shall take such action in consultation with the DTSC Project

Director and in accordance with all applicable provisions of this Order. Within seven days of the onset of such an event, DOE shall furnish a report to DTSC, signed by DOE's Project Director, setting forth the events which occurred and the measures taken in the response thereto. In the event that DOE fails to take appropriate response and DTSC takes the action instead, DOE shall be liable to DTSC for all costs of the response action. Nothing in this Section shall be deemed to limit any other notification requirement to which DOE may be subject.

3.0. PUBLIC PARTICIPATION

3.1. In conjunction with DOE, DTSC shall implement the public review process specified in DTSC's Public Participation Policy and Guidance Manual and as detailed in the final SSFL Public Participation Plan dated March 2009. In accordance with the Site Public Participation Plan, opportunities shall be provided for the public to review and comment on all draft plans and reports prepared by DOE. DTSC shall consider any comment received from the public as it evaluates draft plans and reports prepared by DOE. In response to comments received, DTSC shall prepare a response to the public comments, explaining the disposition of DTSC’s actions regarding the comments received. If requested by DTSC, DOE shall submit within two weeks, if practicable, of any request the information necessary for DTSC to prepare its responses to the public comments.

4.0. CALIFORNIA ENVIRONMENTAL QUALITY ACT

4.1. DOE shall cooperate in providing all available information necessary to facilitate DTSC's preparation of an analysis under the California Environmental Quality Act (CEQA), Calif. Public Resources Code Sections 21000 *et seq.* The costs incurred by DTSC in complying with CEQA are response costs, and DOE shall reimburse DTSC for such costs pursuant to Section 7.12, *below*.

4.2. DTSC's analysis shall include, but not be limited to, the following:

4.2.1. Scoping at the conclusion of all data gathering efforts to identify the types of environmental impacts that might be anticipated.

4.2.2. Identification and quantification of environmental impacts that are anticipated to occur as a result of implementing the activities specified in this Order.

4.2.3. Identification of alternative mitigation measures that could be used to mitigate the identified environmental impacts that are anticipated to occur as a result of implementing the activities specified in this Order, and an assessment as to the relative effectiveness of each mitigation measure.

5.0. U.S. ENVIRONMENTAL PROTECTION AGENCY ACTIVITIES

5.1. Given the technical expertise of the United States Environmental Protection Agency (U.S. EPA) in radiological cleanups, the Parties expect that U.S. EPA will contribute to the Site investigation and cleanup confirmation activities described in the AIP (Attachment B) and in the "Confirmation Protocol; 'Not to Exceed'; Background Cleanup Standard for Soils" (Attachment C). U.S. EPA is not a party to this Order and DTSC is the regulatory agency overseeing the work of the responsible party, DOE.

U.S. EPA has indicated that it is willing to perform the technical work identified for U.S. EPA in the AIP (Attachment B), provided that DOE fully funds U.S. EPA's work. Subject to the limitations set forth in Section 7.15.1 of this Order, DOE will use its best efforts to ensure that U.S. EPA is able to carry out the identified activities, including, but not limited to, providing all necessary funding for U.S. EPA.

5.2. The parties acknowledge that USEPA should exercise its independent technical judgment in performing the technical work identified for EPA in the AIP (Attachment B) and in the "Confirmation Protocol; 'Not to Exceed'; Background Cleanup Standard for Soils" (Attachment C).

6.0. OTHER RELATED LEGAL ACTIONS

6.1. DTSC and DOE mutually acknowledge that an action involving the Site was filed in the United States District Court for the Northern District of California entitled *Natural Resources Defense Council, Inc., Committee to Bridge the Gap, and City of Los Angeles v. Department of Energy, et al.* ("NRDC v. DOE"), Case No. C-04-04448 SC, in which the plaintiffs in that action sought and obtained summary judgment against DOE. In the summary judgment order, dated May 2, 2007, 2007 WL 1302498, United States District Judge Samuel Conti permanently enjoined DOE "from transferring ownership or possession, or otherwise relinquishing control over, any portion of Area IV" of the Santa Susana Field Laboratory ("SSFL") until DOE has completed an Environmental Impact Statement under the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321 *et seq.*, and issued a Record of Decision pursuant to NEPA. The Court in that action further stated that it would retain jurisdiction over the action "until it is satisfied that the

DOE has met its legal obligations as they relate to the remediation of Area IV" of the SSFL.

6.2. DOE and DTSC acknowledge that DOE's obligations under this Order are potentially inconsistent with the court's May 2, 2007 order in *NRDC v. DOE.* To that end, DOE and DTSC shall make their best efforts to seek and obtain the support of the plaintiffs in *NRDC v. DOE* in applying for relief from the terms of that court's order, so as to allow the work under this Order to be performed. In the event that DOE and DTSC are not successful in obtaining relief from that order so as to allow the work under this Order to be performed, DOE's obligations under this Order shall be stayed. The Parties shall thereupon undertake to agree upon a procedure for environmental review that would meet the requirements of the injunction in *NRDC v. DOE* and to make any necessary modifications to this Order.

7.0. OTHER REQUIREMENTS AND PROVISIONS

7.1. Project Director. Within 14 days of the effective date of this Order, DTSC and DOE shall designate their respective Project Directors and shall notify each other in writing of the Project Director they have selected. DOE's Project Director shall be responsible for overseeing the implementation of this Order and for designating a person to act in his/her absence. All communications between DOE and DTSC, and all documents, report approvals, and other correspondence concerning the activities performed pursuant to this Order shall be directed through their respective Project Directors. Each party may change its Project Director with at least seven days prior written notice to the other party.

7.2. Web Site. DOE shall continue to proportionally contribute to the website that has been established for purposes of posting documents and information related to the investigation and cleanup of the SSFL (http://www.dtsc-ssfl.com). The content of the website shall remain solely under the control of DTSC. No changes to the website are to be made without prior DTSC approval.

7.3. DTSC Approval.

7.3.1. Subject to the dispute resolution procedures in Section 7.19.1 through 7.19.9, DOE shall revise any workplan, report, specification, or schedule in accordance with DTSC's written comments. DOE shall submit to DTSC any revised documents by the due date specified by DTSC. Revised submittals are subject to DTSC's written approval or disapproval. If DTSC disapproves of any submittal in whole or in part, it shall explain in writing the reason(s) for its disapproval.

7.3.2. Upon receipt of DTSC's written approval, DOE shall commence work and implement any approved workplan in accordance with the schedule and provisions contained therein.

7.3.3. Any DTSC approved workplan, report, specification, or schedule required by this Order shall be deemed incorporated into this Order.

7.3.4. Any requests for revision of an approved workplan requirement must be in writing. Such requests must be timely and provide justification for any proposed workplan revision. DTSC shall approve such proposed revisions absent good cause not to do so. Any approved workplan modification shall be in writing and shall be incorporated by reference into this Order.

7.3.5. Verbal advice, suggestions, or comments given by DTSC representatives shall not constitute an official approval or disapproval.

7.3.6. DTSC shall use its best efforts to review, comment, and render a decision on any workplan, report, specification, or schedule submitted by DOE in a timely fashion, with the goal of rendering a decision within 120 days of DOE's submittal. Failure by DTSC to render a decision within 120 days of DOE's submittal shall not constitute *de facto* approval. Any deadline in this Order directly affected by DTSC's failure to render a decision in the time frames specified under this section shall be extended for a period of time not to exceed the actual time taken beyond the specified time frame to for DTSC to render the decision.

7.4. Submittals.

7.4.1. DOE shall provide DTSC with quarterly progress reports of response action activities conducted pursuant to this Order.

7.4.2. Any report or other document submitted by DOE pertaining to its activities at the Site pursuant to this Order shall be signed and certified by a duly authorized representative.

7.4.3. The certification required above, shall be in the following form:

> I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

7.4.4. All reports and other documents submitted by DOE or its consultants in response to this Order shall be submitted to DTSC in both hard copy and electronically..

7.4.5. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices, or other submissions relating to this Order shall be in writing and shall be sent to the current Project Directors.

7.5. Proposed Contractor/Consultant.

All work performed by DOE pursuant to this Order shall be under the direction and supervision of a professional engineer or registered geologist, registered in California, with expertise in hazardous substance site cleanup. DOE's contractors and consultants shall have the technical expertise sufficient to fulfill their responsibilities. Within 14 days of the effective date of this Order or any contract awarded to implement this Order, DOE shall notify the DTSC Project Director in writing of the name, title, and qualifications of the professional engineer or registered geologist and of any contractors or consultants and their personnel to be used in carrying out the requirements of this Order. Notifications submitted prior to the effective date of this Order in response to Section 4.5. of the August 16, 2007 Consent Order for Corrective Action need to be resubmitted only if the information contained in the notification has changed.

7.6. Chemical and Radiological Analyses

7.6.1. Except as provided below, DOE shall use California State-certified analytical laboratories for all chemical and radiological analyses required to comply with this Order. If a California State-certified laboratory is not available for a particular test required by this Order, DOE shall use an alternative laboratory identified by DOE subject to approval by DTSC. The names, addresses, telephone numbers, and

California Department of Public Health, Environmental Laboratory Accreditation Program (ELAP) certification numbers of the laboratories DOE proposes to use must be specified in the applicable workplans.

7.6.2. DOE shall monitor to ensure that high quality data are obtained by their consultants and contract laboratories. DOE shall ensure that laboratories it uses for chemical analyses perform such analyses according to the latest approved edition of "Test Methods for Evaluating Solid Waste, (SW 846)," or other methods deemed satisfactory to DTSC. If methods other than U.S. EPA methods are to be used, DOE shall specify all such protocols in the affected workplan. DTSC shall reject any chemical data that do not meet the requirements of the approved workplan, U.S. EPA analytical methods, or quality assurance/quality control procedures, and may require resampling and analysis. DOE shall ensure that laboratories it uses for radiological analyses perform such analyses according to the latest approved edition of "HASL-300, EML Procedures Manual" or other methods deemed satisfactory to DTSC. If methods other than HASL-300 methods are to be used, DOE shall specify all such protocols in the affected workplan (e.g., RI workplan). DTSC shall reject any radiological data that do not meet the requirements of the approved workplan, HASL-300 methods, or quality assurance/quality control procedures, and may require resampling and analysis.

7.6.3. DOE shall ensure that the laboratories used for analyses have quality assurance/quality control programs. DTSC may conduct a performance and quality assurance/quality control audit of the laboratories chosen by DOE before, during, or after sample analyses. Upon request by DTSC, DOE shall have their selected laboratory perform analyses of samples provided by DTSC to demonstrate laboratory

performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control procedures, resampling and analysis may be required.

7.7. Sampling and Data/Document Availability.

7.7.1. Upon request, DOE shall provide DTSC with the results of all sampling or tests or other data generated by its employees, agents, consultants, or contractors pursuant to this Order. DOE shall follow the same signature and certification requirements of Section 7.4.3, 7.4.4, and 7.4.5, *above* for information submitted pursuant to this section.

7.7.2. Notwithstanding any other provisions of this Order, DTSC retains all of its information gathering and inspection authority and rights, including enforcement actions related thereto, under the Health and Safety Code, and any other State or federal law, subject to national security and other restrictions imposed under the Atomic Energy Act of 1954, as amended, applicable executive orders or any other applicable requirements.

7.7.3. DOE shall notify DTSC in writing at least seven days prior to beginning each separate phase of field work approved under any workplan required by this Order. If DOE believes it must commence emergency field activities without delay, DOE shall seek emergency telephone authorization from the DTSC Project Director or, if the Project Director is unavailable, their designee, to commence such activities immediately.

7.7.4. At the request of DTSC, DOE shall provide or allow DTSC or its authorized representative to take split or duplicate samples of all samples collected by DOE pursuant to this Order. At the request of DOE, DTSC shall allow DOE or their authorized representative(s) to take split or duplicate samples of all samples collected

by DTSC under this Order. At the request of DOE or DTSC, U.S. EPA will allow DOE or DTSC or their authorized representatives to take split or duplicate samples of all samples collected by U.S. EPA..

7.8. Access.

7.8.1. Subject to Boeing's and DOE's security and safety procedures at the Site, DOE shall provide DTSC and its representatives access at all reasonable times, following normal DOE procedures, if any, for access onto the Site, to the areas of the Site under DOE's control, and any other property to which access is required for implementation of this Order, and shall permit such persons to inspect and copy all non-privileged records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Order and that are within the possession or under the control of DOE, or its contractors or consultants.

7.8.2. To the extent that work being performed pursuant to this Order must be conducted on areas of the Site not under DOE's ownership, possession or control, or on property beyond the Site boundary, DOE shall use its best efforts to obtain access agreements necessary to complete work required by this Order from the present owners or possessors, as appropriate, of such property, within 30 days of approval of any workplan for which access is required. "Best efforts" as used in this paragraph shall include, at a minimum, a letter by certified mail from DOE to the present owners or possessors of such property, requesting an agreement to permit DOE and DTSC and their authorized representatives access to such property. Any such access agreement shall provide for access to DTSC and its representatives. DOE shall provide DTSC's Project Director with a copy of any access agreements in their possession. In the event

that an agreement for access is not obtained within 30 days of approval of any workplan for which access is required, an unanticipated need for access becomes known to DOE, or access is revoked by the property owner or possessor, DOE shall notify DTSC in writing within 14 days thereafter regarding both the efforts undertaken to obtain access and the failure to obtain such agreements. In such event, DTSC may elect to use its authority under Chapter 6.8 of Division 20 of the California Health and Safety Code to obtain access for DOE, including, without limitation, its authority to assess daily civil penalties against the refusing property owner under Health and Safety Code Section 25367. In the event that DTSC is unable to obtain access from the present owners or possessors of such property or take whatever measures are necessary so that the work may proceed, DOE's obligation to perform that particular element of work and its obligation to provide access to DTSC shall be stayed until the appropriate relief is obtained.

7.8.3. Nothing in this section limits or otherwise affects DTSC's right of access and entry pursuant to any applicable State or federal law or regulation.

7.8.4. Nothing in this Section shall be construed to limit DOE's liability and obligation to perform response action that are being conducted pursuant to this Order, either within the Site boundary or beyond the Site boundary as provided in the AIP, including such action on areas of the Site not owned, possessed or controlled by DOE, or on property beyond the Site boundary except as clarified in Section 7.8.2, with respect to the timing of DOE's liabilities and obligations. The AIP describes DOE's commitment to remediate the areal extent of any contiguous radiologic or chemical contamination of soil that emanates from within the Site.

7.9. Record Preservation.

7.9.1. In addition to requirements applicable to DOE under 36 CFR Chapter 12, Subchapter B, in accordance with NARA-approved DOE Records Disposition Schedules, DOE shall retain, during the implementation of this Order and for a minimum of ten (10) years after the Acknowledgment of Satisfaction executed pursuant to Section 9.0 of this Order, all data, records, and documents that relate to implementation of this Order or to radioactive waste or hazardous waste management and/or disposal. DOE shall notify DTSC in writing 90 days prior to the destruction of any such records, and shall provide DTSC with the opportunity to take possession of any such records. Such written notification shall reference the effective date, caption, and docket number of this Order and shall be sent to the DTSC Project Director.

7.10. Notice to Contractors and Successors. DOE shall provide a copy of this Order to all contractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order and shall condition all such contracts on compliance with the terms of this Order. DOE shall give written notice of this Order to any successor in interest prior to transfer of ownership or operation of any portion of the Site that DOE owns or operates and shall notify DTSC at least 30 days prior to such transfer. DOE or its contractors shall provide written notice of this Order to all subcontractors hired to perform any portion of the work required by the Order. DOE shall nonetheless be responsible, to the extent reasonably within their control, for ensuring that their contractors and subcontractors perform the work contemplated herein in accordance with this Order. With regard to the activities undertaken pursuant to this Order, in addition to any defenses which may be available under this Order, the

defenses available to DOE shall be those specified in Health and Safety Code section 25323.5 (incorporating by reference Sections 101(35) and 107(b) of CERCLA, 42 U.S.C., section 9601(35) and 9607(b),

7.11. Compliance with Applicable Laws and Regulations. All actions taken pursuant to this Order by DOE shall be undertaken in accordance with applicable local, State, and federal laws and regulations. As specified in Section 1.6, compliance with this Order and the 2007 Order shall constitute DOE's full and complete compliance with all applicable provisions of Chapters 6.5 and 6.8 of the Division 20 of the California Health and Safety Code (the California Hazardous Waste Control Law, Sections 25100 *et seq.* of that Code, and the California Hazardous Substances Account Act, Sections 25300 *et seq.* of that Code) with respect to the application of the provisions of this Order to radiologic or chemical contamination of soil at the Site or any contiguous radiologic or chemical contamination of soil emanating from within Area IV or the Northern Buffer Zone, within or outside of the SSFL boundaries, that has been identified by U.S.EPA in its radiologic characterization survey or by DTSC as part of the investigation of chemical contaminants that DOE has remediated. DOE shall obtain or cause their representatives to obtain all permits and approvals necessary under such applicable laws and regulations.

7.12. Costs.

7.12.1. DOE is liable for all costs associated with the implementation of this Order, including all costs incurred by DTSC in overseeing the work required by this Order, to the extent authorized under California Health and Safety Code Sections 25269 through 25269.6, including procedures for dispute resolution under Section 7.19.1

through 7.19.9 ,*below*. DTSC shall retain all cost records associated with the work performed under this Order as required by State law. DTSC shall make all documents that support DTSC's cost determination available for inspection upon request, as provided in the California Public Records Act. With respect to the payment of costs, DOE may use any alternative mechanism authorized by federal law.

7.12.2. DOE retains any rights it may have to recover the costs of complying with this Order from any person not a Party to this Order and nothing in this Consent Order is intended to compromise or hinder any such rights.

7.13. Liability. Except as expressly set forth in Section 1.6 above, nothing in this Order shall constitute or be construed as a satisfaction or release from liability for any conditions or claims arising as a result of past, current, or future operations of DOE. Notwithstanding compliance with the terms of this Order, but subject to the express provisions in Section 1.6 above, DOE may be required to take further actions as are necessary to protect public health or welfare or the environment (a) in the event previously unanticipated conditions are discovered that present an imminent and substantial endangerment notwithstanding the work to be performed under this Order, or (b) in the event any negligent or intentional act or omission by DOE during the performance of its obligations under this Order results in the need for additional response action in order to achieve this Order's objective to clean up chemical and radiological contamination at the Site to local background levels."

7.14. Government Liabilities. The State of California shall not be liable for injuries or damages to persons or property resulting from acts or omissions by DOE in carrying out activities pursuant to this Order, nor shall the State of California be held as

a party to any contract entered into by DOE or its agents in carrying out activities pursuant to the Order.

7.15. Availability of Federal Funds.

7.15.1. DOE's obligations under this Order are subject to the availability of funds appropriated and legally available for such purpose. No provision of this Order shall be interpreted as or constitute a commitment or requirement that DOE obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or any other applicable provision of law. DOE shall use its best efforts, by means of the federal budgetary process, to obtain the funds necessary to perform its obligations under the 2007 Order and this Order. Nothing in this Order shall be construed to require disclosures related to confidential internal federal budget deliberations not otherwise authorized under federal law.

7.15.2. It is agreed that if inadequate funds are appropriated for such purposes, DOE shall notify DTSC promptly and develop a plan in writing to endeavor to secure additional funding to carry out the requirements of this Order. Nothing herein shall be construed as precluding DOE from arguing that the unavailability of appropriated funds constitutes a *force majeure* event. DTSC and DOE agree that in any dispute or any proceeding to enforce the requirements of this Order, DOE may raise as a defense that any failure or delay was caused by the unavailability of appropriated funds.

7.16. [Reserved]

7.17. Incorporation of Plans and Reports. All plans, schedules, and reports that require DTSC approval and are submitted by DOE pursuant to this Order and are not

the subject of dispute resolution under Section 7.19.1 through 7.19.9 are incorporated in this Order upon approval by DTSC.

7.18. Penalties for Noncompliance.

7.18.1. DOE shall be liable for stipulated penalties in the amount of $15,000 per day for a material failure to comply with the requirements of this Order, including the making of any false statement or representation in any document submitted for purposes of compliance with this Order. “Compliance” by DOE shall include, but shall not be limited to, completion of the activities under this Order or any workplan or other plan approved under this Order within the specified time schedules established by and approved pursuant to this Order or as otherwise directed by DTSC under this Order.

7.18.2. Following DTSC’s determination that DOE has materially failed to comply with a requirement of the Order, DTSC shall give DOE written notification of the violation and describe the noncompliance. DTSC shall send DOE a written notice of noncompliance with an opportunity to cure by a date designated by DTSC in lieu of or prior to a written demand for the payment of the penalties. DOE may dispute DTSC's finding of noncompliance by invoking the dispute resolution procedures described in Section 7.19.1 through 7.19.9 herein. All penalties assessed under Section 7.18.1 shall begin to accrue on the business day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. The accrual and payment of any proposed penalty shall be tolled during the dispute resolution period. If DOE does not prevail in dispute resolution, any penalty shall be due to DTSC within 30 days of

resolution of the dispute unless appealed to a court of law. If DOE prevails in dispute resolution, no penalty shall be paid.

7.18.3. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Order and other applicable provisions of law, except that the same facts shall not be relied upon to generate separate and cumulative penalties against DOE. Notwithstanding the provisions of Section 7.18.1, 7.18.2, or 7.18.3, DTSC reserves the right to seek additional remedies or sanctions for knowing violations of this Order, including knowingly making any false statement or representation in any document submitted for purposes of compliance with this Order

7.19. Dispute Resolution.

7.19.1. The parties agree that the procedures contained in this section are the exclusive procedures for resolving all disputes that may arise under this Order. By its execution of this Order, and for no other purpose unrelated to this matter, DOE expressly agrees that DTSC has the authority to enforce the terms of this Order. At no time during any informal, formal, or judicial resolution of any dispute arising under this Order shall DOE contend that DTSC does not possess such legal authority. Nor shall DOE initiate a separate challenge to such legal authority in state or federal court.

7.19.2. If any dispute arises over the interpretation of, or compliance with, any provision of this Order, DOE's Project Director and DTSC's Project Director shall attempt to resolve the dispute informally.

7.19.3. If DTSC's Project Director determines after due consideration that the dispute cannot be resolved informally, the Project Director shall notify DOE of such determination. DOE may then pursue the matter by making an objection in writing to

DTSC's Director, or his or her designee, with a copy to DTSC's Project Director. DOE's written objection shall set forth the specific points of the dispute and the basis for DOE's position. DOE's objection to DTSC's Director shall be served by mail no later than fourteen (14) calendar days after DOE is notified of the determination by DTSC's Project Director that the dispute cannot be resolved informally. The date by which DOE may submit any written objection may be extended by DTSC for good cause, but shall not exceed an additional 45 days.

7.19.4. Within 30 calendar days after DTSC's receipt of DOE's written objection, DTSC's Director, or another individual authorized to carry out the functions of the DTSC Director, shall meet with DOE's Chief Operations Officer from the Office of Environmental Management, or someone who is otherwise of equivalent decisionmaking authority as DTSC's Director, for the purpose of resolving the dispute through formal discussions. This formal dispute resolution on DOE's objection(s) shall include the DOE Assistant Secretary for Environmental Management, or another individual authorized under federal law to carry out the functions of the Assistant Secretary for Environmental Management, DTSC's Director, or his or her designee, and the Secretary of the California Environmental Protection Agency (CalEPA), or another state official designated pursuant to State law to carry out the functions of the Secretary of CalEPA, and shall take place during the 30-day period after receipt of DOE's objection(s), or such longer period if determined necessary by DTSC. Within fourteen (14) calendar days after the conclusion of the formal discussion period, the Secretary of CalEPA, or another state official designated pursuant to State law to carry out the functions of the Secretary of CalEPA, shall provide the Assistant Secretary for

Environmental Management with CalEPA's written decision on the dispute. CalEPA's written decision shall reflect any agreements reached during the formal discussion period, shall represent the decision of both DTSC's Director and the CalEPA Secretary, and shall be signed by the Secretary of CalEPA, or another state official designated pursuant to State law to carry out the functions of the Secretary of CalEPA. If DOE obtains the views of the United States Environmental Protection Agency ("USEPA") on the dispute, DTSC and CalEPA shall consider the USEPA position prior to issuing a decision.

7.19.5. During the pendency of all dispute resolution procedures set forth in Section 7.19.1 through 7.19.4 of this Order, the time periods for completion of work to be performed under this Order that are affected by such a dispute shall be extended for a period of time not to exceed the actual time taken to resolve the dispute. The existence of such a dispute shall not excuse, toll, or suspend any other compliance obligation or deadline required pursuant to this Order except to the extent that such other compliance obligation or deadline is dependent upon the resolution of the matter that is the subject of dispute under this Order, in which case the time periods for completion of such other compliance obligation or deadline required pursuant to this Order that are affected by such a dispute shall be extended for a period of time not to exceed the actual time taken to resolve the dispute.

7.19.6. In the event that DOE desires to affirmatively challenge a decision made or an action taken against DOE by DTSC under this Order, DOE may commence a civil action in United States District Court, pursuant to 28 U.S.C. § 1345, for a determination of the parties' rights and obligations with respect to the dispute in question. In such

event, DTSC agrees not to request a transfer of such matter to State court on abstention or other grounds. Notwithstanding DOE's right to seek judicial relief pursuant to this Section, DTSC may alternatively elect to utilize its rights under Section 7.19.7 to initiate a legal action to obtain a declaration that DOE is required to perform the obligation that was the subject of the dispute resolution procedures in Section 7.19.1 through 7.19.4 above.

7.19.7. In the event that DTSC desires to enforce a decision it has made under this Order, an action it has taken against DOE under this Order, or DOE's failure or refusal to perform any obligation or requirement of this Order, DTSC initially shall file a civil action in state court, after which filing DOE agrees to timely remove the action to the applicable United States District Court pursuant to 28 U.S.C. § 1442(a)(1), and DTSC agrees not to petition for a remand or other transfer of such matter to state court.

7.19.8. Solely for purposes of resolving any dispute between DTSC and DOE relating to the requirements of this Order, and for no other purposes, DOE shall not contest DTSC's allegation that the Site is a facility that is currently operated by an agency of the United States (*i.e.* DOE) as set forth in Section 120(a)(4) of CERCLA, 42 U.S.C. § 9620(a)(4). DOE also agrees, solely for purposes of any potential enforcement of this Order, and for no other purposes, that DOE shall not contest DTSC's allegation that the standards and requirements in this Order are no more stringent than the standards and requirements that would be applicable to a similar facility operated by a private party.

7.19.9. Resolution of any dispute arising out of this Order, whether being sought informally, formally, or judicially, shall be based solely upon the obligations and

responsibilities of the Parties as expressly set forth in this Order. DTSC shall not assert that DOE is subject to or required to comply with Section 25359.20 of the California Health and Safety Code. DOE shall not assert any defenses based on either party's alleged lack of legal authority to agree to, or enforce, the terms herein, including, without limitation, a defense based on an alleged preemption by federal law of DTSC's authority to oversee and enforce the terms of this Order.

7.20. Force Majeure. DOE shall cause all work to be performed within the time limits set forth in this Order, unless an extension is approved by DTSC for good cause or performance delayed by events that constitute an event of *force majeure*. DOE shall make good faith efforts to avoid circumstances that could result in *force majeure* that could impact the completion of work pursuant to the time limits set forth in this Order. For purposes of this Order, an event of *force majeure* is an event arising from circumstances beyond the control of DOE that delays performance of any obligation under this Order, provided DOE has undertaken all appropriate planning and preventive measures to avoid any foreseeable circumstances. Increases in cost of performing the work required by this Order shall not be considered circumstances beyond the control of DOE. For purposes of this Order, events which constitute a *force majeure* shall include, without limitation, events such as acts of God, war, civil commotion, unusually severe weather, labor difficulties, shortages of labor, materials, or equipment, government moratorium or shutdown, delays in obtaining necessary permits due to action or inaction by third parties, restraint by court order, unavailability of appropriated funds, earthquake, fire, flood, or other casualty. DOE shall notify DTSC in writing promptly after DOE learns of the occurrence of the *force majeure* event. Such notification shall

describe the anticipated length of the delay, the cause or causes of the delay, the measures taken or to be taken by DOE to minimize the delay, and the timetable by which these measures shall be implemented. If DTSC agrees that DOE's delay, non-performance or non-compliance is attributable to a *force majeure* event, the time for performance of or compliance with the applicable obligation or requirement of this Order shall be extended as the parties agree is reasonably necessary to complete the obligation or requirement. If DTSC does not agree that the delay is attributable to a *force majeure* event, or the Parties do not concur on the amount of time to complete or fulfill the obligation or requirement affected by the *force majeure* event, the matter shall be subject to the dispute resolution procedures set forth above.

7.21. Schedule Changes. If DOE is unable to perform any activity or submit any document by the date specified in any schedule developed pursuant to this Order, including the date referenced in the AIP, due to delays by DTSC in completing its review of or response to submittals by DOE, upon DTSC's completion of such review of or response to such submittals, the schedule shall be automatically adjusted accordingly, unless DTSC and DOE agree to an alternative schedule, and the new schedule shall be incorporated by reference into this Order. In such event, the provisions of Section 7.18 (Penalties for Noncompliance) shall not apply to DOE's inability to perform any activity or submit any document under the original schedule; however, Section 7.18 (Penalties for Noncompliance) shall apply to the new schedule unless the schedule is revised pursuant to this Section 7.21 or Section 7.22.

7.22. Extension Requests. If DOE is unable to perform any activity or submit any document within the time required under any schedule developed pursuant to or in

this Order, including any schedule or deadline referenced in the AIP, DOE shall, prior to expiration of the time, request an extension of the time in writing. The extension request shall include a justification for the delay and the proposed new schedule. All such requests shall be in advance of the date on which the activity or document is due. If DTSC determines that good cause exists for an extension, it shall grant the request and specify a new schedule in writing. “Good cause” shall include, but shall not be limited to, delays in receiving any approvals, authorizations or permits that DOE is required to obtain from any federal, State or local agency so as to allow the work under this Order to be performed, as well as delays by DTSC in completing its review of and response to submittals by DOE to the extent that future deadlines specified in the schedule are impacted. DOE shall submit a revised schedule to DTSC for review and approval, which shall be incorporated by reference into this Order.

7.23. Parties Bound. This Order shall apply to and be binding upon DOE, and agents, employees, contractors, consultants, successors and assignees.

7.24. Other State Agencies. No provision of this Order is intended to, nor shall be construed to, interfere with or supersede the authority of any other State or any local agency.

7.25. Time Periods. Unless otherwise specified, time periods begin from the effective date of this Order and “days” means calendar days. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday or federal or State holiday, the period shall run until the next business day.

7.26. Severability. The requirements of this Order are severable. Should a provision or provisions of this Order be determined by a court to be ineffective, or

should a court determine that any federal or State law or regulation incorporated into, referenced in, or authorizing this Order is invalid or unenforceable in whole or in part, DOE shall comply with each and every remaining effective provision.

MODIFICATION

8.0. This Order may be modified by the mutual agreement of the parties. Any agreed modifications shall be in writing, shall be signed by both Parties, shall have as their effective date the date on which they are signed by DTSC, and shall be deemed incorporated into this Order.

TERMINATION AND SATISFACTION

9.0. The provisions of this Order shall be deemed satisfied upon the execution by the parties of an Acknowledgment of Satisfaction (Acknowledgment). DTSC shall prepare the Acknowledgment for DOE's signatories. The Acknowledgment shall specify that DOE has demonstrated to the satisfaction of DTSC that the terms of this Order including payment of DTSC's costs have been satisfactorily completed. The Acknowledgment shall affirm DOE's continuing obligation to preserve all records after the rest of the Order is satisfactorily completed.

EFFECTIVE DATE

10.0. The effective date of this Order shall be the date on which the Order is signed by DTSC.

NO THIRD PARTY BENEFICIARY

11.0. The Parties to this Order agree that there are no third party beneficiaries to any of the terms and conditions contained in, or rights and obligations arising out of, this Order.

DATE: 12/6/10

Maziar Movassaghi, Acting Director
Department of Toxic Substances Control

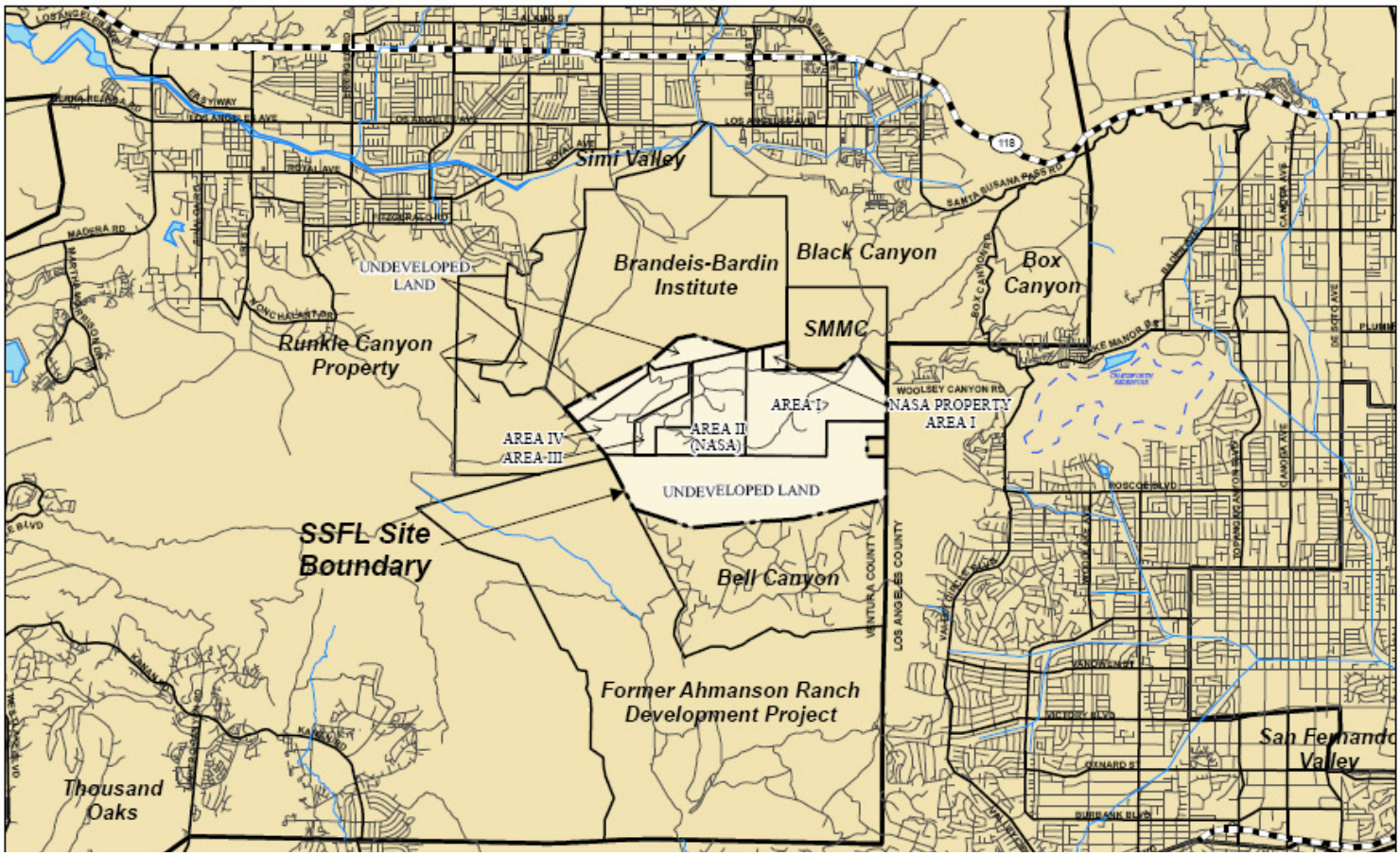
DATE: 12/06/2010

Cynthia V. Anderson, Chief Operations Officer
United States Department of Energy

ATTACHMENT A

Santa Susana Field Laboratory

Regional Map



ATTACHMENT B

Final Agreement in Principle

JOINT SETTLEMENT FRAMEWORK

FINAL Agreement in Principle
between
The U.S. Department of Energy and the State of California

Regarding Cleanup of Area IV of the
Santa Susana Field Laboratory

SUMMARY: The end state of the site (the whole of Area IV and the Northern Buffer Zone) after cleanup will be background (i.e., at the completion of the cleanup, no contaminants will remain in the soil above local background levels), subject to any special considerations specified below.

- Clean up radioactive contaminants to local background concentrations. Possible exceptions (where unavoidable by other means):

    - The framework acknowledges that, where appropriate, DOE will engage in an Endangered Species Act (ESA) Section 7(a)(2) consultation with the U.S. Fish and Wildlife Service (FWS) over any species or critical habitat that may be affected by a federal action proposed to be undertaken herein on a portion of the site. Impacts to species or habitat protected under the Endangered Species Act may be considered as possible exceptions from the cleanup standard specified herein only to extent that the federal Fish and Wildlife Service, in response to a request by DOE for consultation, issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.

    - The acceptance and exercise of any of the following exceptions is subject to DTSC's oversight and approval, and the resulting cleanup is to be as close to local background as practicable:
        - Detection limits for specific contaminants exceed the local background concentration, in which case the cleanup goal shall be the detection limits for those specific contaminants.
        - Native American artifacts that are formally recognized as Cultural Resources.
        - Other unforeseen circumstances but only to the extent that the cleanup cannot be achieved through technologically feasible measures. Under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume.

- US EPA, in the course of conducting its radioactive contaminant background study, will determine local background levels and detection limits. Upon completion of the EPA led radiologic local background study, a “look-up” table of the radiologic cleanup levels will be prepared, which will include both local background concentrations as well as minimum detection limits for specific contaminants whose minimum detection limits exceed local background concentrations.

- Clean up chemical contaminants to local background concentrations Possible exceptions (where unavoidable by other means):
    - The framework acknowledges that, where appropriate, DOE will engage in an Endangered Species Act (ESA) Section 7(a)(2) consultation with the U.S. Fish and Wildlife Service (FWS) over any species or critical habitat that may be affected by a federal action proposed to be undertaken herein on a portion of the site. Impacts to species or habitat protected under the Endangered Species Act may be considered as possible exceptions from the cleanup standard specified herein only to extent that the federal Fish and Wildlife Service, in response to a request by DOE for consultation, issues a Biological Opinion with a determination that implementation of the cleanup action would violate Section 7(a)(2) or Section 9 of the ESA, and no reasonable and prudent measures or reasonable and prudent alternatives exist that would allow for the use of the specified cleanup standard in that portion of the site.

    - The acceptance and exercise of any of the following exceptions is subject to DTSC’s oversight and approval, and the resulting cleanup is to be as close to local background as practicable:
        - Detection limits for specific contaminants exceed the local background concentration, in which case the cleanup goal shall be the detection limits for those specific contaminants.
        - Native American artifacts that are formally recognized as Cultural Resources
        - Other unforeseen circumstances but only to the extent that the cleanup cannot be achieved through technologically feasible measures. Under no circumstances shall exceptions for unforeseen circumstances be proposed in excess of five percent of the total soil cleanup volume.

- DTSC, in the course of overseeing and approving its chemical contaminant local background study, will determine local background levels and chemical detection limits (using methods that are consistent with EPA guidance on determining local background concentration values). Upon completion of the DTSC led chemical background study, a “look-up” table of the chemical cleanup levels will be prepared, which will include both local background concentrations as well as minimum

detection limits for specific contaminants whose minimum detection limits exceed local background concentrations.

- Residual concentrations "not to exceed" local background concentrations i.e., if during site survey efforts or during confirmatory sampling the level of any constituent detected in a soil sample is above local background levels, step-outs will be taken to delineate the contamination and removed; soil above local background will not be averaged with other soil. This process should not be inconsistent with any guidance that EPA may issue pertaining to the practice of implementing a not to exceed local background cleanup approach.

- Cleanup to local background means removal of soils contaminated above local background levels
    - No "leave in place" alternatives will be considered
    - No on-site burial or landfilling of contaminated soil will be considered

- Backfill/replacement soils must not exceed local background levels
    - Onsite soils that do not exceed local background may be used as backfill/replacement soils
    - Offsite soils that have been verified to not exceed local background levels may be used as backfill/replacement soils
    - Backfill/replacement soils that are acceptable for use shall be verified as follows:
        - U.S. EPA for radioactive contaminants
        - DTSC for chemical contaminants

- Disposal of contaminated soils:
    - Soils contaminated with radioactive contaminants above local background to licensed low-level radioactive waste (LLRW) disposal site or an authorized LLRW disposal facility at a DOE site
    - Soils contaminated with chemical contaminants above local background:
        - Hazardous wastes to licensed Class 1 hazardous waste disposal facilities only
        - Non-hazardous waste to licensed Class 2 or subtitle D compliant Class 3 disposal facilities only
    - Mixed wastes (with radioactive and hazardous constituents) to go to a site licensed for mixed wastes or an authorized mixed waste disposal facility at a DOE site
    - In addition to meeting the above disposal requirements, all soils must also meet the waste acceptance criteria for the receiving facility.

- EPA to carry out the following:

    - U.S.EPA to provide split samples to DTSC for chemical contaminants as it samples for radioactive constituents during its Area IV and Northern Buffer Zone Survey work
    - U.S.EPA to conduct post cleanup confirmatory radiation assessment in areas where cleanup was performed to verify completion of cleanup
    - U.S.EPA to verify that backfill/replacement soils do not exceed local background for radioactive constituents.

- Radioactive contaminants investigation/data gaps
    - U.S.EPA is responsible for the investigation of radioactive contamination. Investigation reports related to radioactive contaminants previously prepared for and submitted by DOE will not require revision – U.S.EPA's survey efforts will be sufficient for determining the nature and extent of radioactive contamination and areas requiring cleanup of radioactive materials within Area IV and Northern Buffer Zone.
    - U.S.EPA, in the course of conducting its radioactive contaminant survey, will determine where onsite levels exceed local background within Area IV and Northern Buffer Zone.

- Chemical investigation/data gaps
    - Where EPA is already taking samples for radiologic contaminants as part of its Area IV and Northern Buffer Zone survey work, DTSC will arrange for analysis of split samples (paid for by DOE)
    - In addition to the split samples from U.S.EPA, in areas where DTSC determines that additional likely chemical contamination is expected, DOE, upon DTSC request, will provide additional information that is existing or readily available for purposes of assisting DTSC in focusing additional investigation efforts, and will conduct additional investigation, under DTSC direction and oversight, consistent with local background/detection limit data quality objectives and measurement sensitivity. In carrying out additional chemical investigation, DOE will not be required to revise investigation reports related to chemical contaminants previously prepared for and submitted by DOE.
    - DTSC, in the course of overseeing and approving the chemical contaminant investigation work, will determine where onsite levels exceed local background.

- Development of risk assessments will not be required.

- As identified by EPA in its rad survey and by DTSC as part of the investigation of chemical contaminants, DOE will remediate the areal extent of any contiguous radiologic or chemical contamination of soil that emanates from within Area IV even to the extent that it migrates beyond

the boundaries of Area IV or the Northern Buffer Zone, within or without the SSFL boundaries.

- Following completion of the characterization studies by EPA and DTSC, DOE will develop a remedial action implementation work plan that describes the Area IV and Northern Buffer Zone cleanup activities. The remedial action implementation work plan will be subject to DTSC review and approval.

- Scheduled completion of soils cleanup remains as 2017

- DOE's commitment to cleanup to local background applies to soils and not to groundwater at the site. Investigation and remediation of groundwater will be separately addressed, and provisions related to investigation and remediation of groundwater will be incorporated into a final agreement.

- Characterization and cleanup (for both chemicals and radiologic contaminants) of both soils and groundwater are subject to DTSC approval.

- Final agreement between DOE and California, and the cleanup obligations within that agreement, will be legally binding and enforceable.

- DTSC work to be fully funded by DOE.

- DTSC will conduct a public participation process to receive public input regarding the agreement prior to its finalization. This process will include a formal comment period and may include public meetings or discussions.

- This framework concerns SSFL Area IV and Northern Buffer Zone only and is between the Department of Energy and the State of California represented by the Department of Toxic Substances Control and the California Environmental Protection Agency. The framework is based upon the unique circumstances of Area IV and Northern Buffer Zone, including the nature of the releases of hazardous and radioactive contamination that have occurred at Area IV and Northern Buffer Zone. This framework does not establish precedent and shall not be used as precedent for any other agreement for any other area within the SSFL.

ATTACHMENT C

CONFIRMATION PROTOCOL
"NOT TO EXCEED"
BACKGROUND CLEANUP STANDARD

CONFIRMATION PROTOCOL
"NOT TO EXCEED"
BACKGROUND CLEANUP STANDARD FOR SOILS

This presents the post-cleanup confirmation sampling that will be used to confirm completion of cleanup activities at the Santa Susana Field Laboratory ("SSFL").

OBJECTIVE

The objective of the post- cleanup confirmation sampling and analysis plan is to confirm that residual concentrations of radiological and chemical contaminants of concern are "not to exceed" local background concentrations. The implementation of this protocol after cleanup has been completed is to assure that the end state of the site (the whole of Area IV and the Northern Buffer Zone) after cleanup will be background (i.e., at the completion of the cleanup, no contaminants remain in the soil above local background levels), subject to any special considerations specified in the agreement executed between U.S. Department of Energy (DOE) and the State of California (the "final agreement"). Sample collection and data analysis shall be consistent with field sampling plans and quality assurance/quality control plans for the U.S. Environmental Protection Agency (USEPA's) Radiological Background Study, California Department of Toxic Substances Control (DTSC) Chemical Background Study, and USEPA's Radiological Study for Area IV/Northern Buffer Zone (NBZ).

RADIOLOGICAL AND CHEMICAL CLEANUP LEVELS

Radiological Contaminants

Per the final agreement, USEPA, in the course of conducting its radioactive contaminant background study, will determine local background levels and detection limits. Upon completion of the USEPA Radiological Background Study, a table of the radiological background levels will be prepared by USEPA, which will include both local background concentrations as well as minimum detection limits for specific contaminants whose minimum detection limits exceed local background concentrations. DTSC will use USEPA's radiological background levels as the "Look-up" Table values for the radiological cleanup levels.

Chemical Contaminants

Per the final agreement, DTSC, in the course of overseeing and approving its chemical contaminant local background study, will determine local background levels and chemical detection limits (using methods that are consistent with USEPA guidance on determining local background concentration values). Upon completion of the DTSC Chemical Background Study, a "Look-Up" Table of the chemical cleanup levels will be prepared, which will include both local background concentrations as well as minimum detection limits for specific contaminants whose minimum detection limits exceed local background concentrations.

CONFIRMATION SAMPLING PROTOCOL

Look-up Table Comparisons

The concentrations of radiological and chemical contaminants of concern observed in the confirmation samples will be compared directly to the concentrations listed in the "Look-up" Tables of radiological and chemical cleanup levels. The "Look-up" levels cannot be exceeded by any sample. The analytical result level shall be the number that the laboratory reports, not including (i.e. not adding or subtracting) the standard deviation (analytical error)[1]. Analytical methodologies shall be consistent with the USEPA Radiological Background Study (for radionuclides) and DTSC's Chemical Background Study (for chemicals) Quality Assurance Project Plans (QAPPs).

When an area has been impacted by and soil removed due to the presence of multiple contaminants, all relevant Look-up Table levels will apply.

Uranium, radium, and thorium may occur naturally at SSFL and may accumulate in drainages. In the absence of an upgradient source, methods to determine whether levels of these constituents in drainages exceed background shall be addressed in site-specific plans.

Sampling Methodology and Results Verification

For purposes of this protocol, discrete samples will be collected and analyzed. Discrete sample collection for radionuclide testing shall be in accordance with MARSSIM. Individual discrete samples may be homogenized in accordance with the approved QAPP. Composite sampling techniques will not be used for confirmation purposes or backfill acceptance testing. Individual confirmation sample results will be compared to Look-up Table values. If the result is above the Look-up Table value, two options may be pursued: 1) the suspect sample may be reanalyzed to verify its accuracy either with a longer count time (for radionuclides) or increased precision (radiation or chemical); or 2) additional soil may be excavated and additional confirmation samples taken as described below. In consultation with the USEPA Technical Advisor, DTSC will determine the best option available when presented with confirmation sampling results that exceed Look-up Table values.

For each source area that requires cleanup, analytical test methods during confirmation sampling shall include all contaminants within the analytical suite associated with the contaminants of concern identified for that source area. For radionuclides, the analytical suites shall be the same as those used by USEPA in its Area IV/NBZ Radiological Study.

[1] Federal Register/Vol. 65. No. 236/Thursday, December 7, 2000/Rules and Regulations, page 76727 paragraph 5 (Interpretation of Analytical Results).

If any individual confirmation sample result is determined to be greater than the Look-up Table concentrations, additional soil will be excavated from the area surrounding the point from which the confirmation sample was taken and additional confirmation samples will then be collected to confirm that remaining concentrations are below the Look-up Table values.

CONFIRMATION SAMPLE LOCATIONS

Confirmation samples will be collected as follows:

Random Samples
A set of statistically derived random points will be sampled from an area where soil has been excavated to confirm that enough soil has been excavated to meet the goal of the cleanup to background. A number of discrete points will be sampled in accordance with the soil confirmation sampling plan prepared and implemented by USEPA.

Targeted Samples
Targeted samples may be collected from an area where soil has been excavated as specified by DTSC in consultation with the USEPA Technical Advisor. The number and location of targeted confirmation samples will be determined by DTSC in consultation with the USEPA Technical Advisor based on their best professional judgment as informed by their knowledge of the site-specific conditions and their observations of soil lithology, visual observations, and location of previous soil contamination that has been removed.

BACKFILL/REPLACEMENT SOILS CONFIRMATION PROTOCOL

Backfill/replacement soils may be from onsite or offsite locations, with a preference for onsite locations. For purposes of this protocol, “onsite” locations are those within the geographic boundaries of the SSFL site.

Backfill/replacement soils will be verified as acceptable for use pursuant to a sample and analysis plan prepared and implemented by USEPA, testing for chemical and radiological constituents and using analytical methodologies proposed by USEPA and consistent with this protocol. For any constituent for which there is no Look-up Table value, USEPA shall propose and DTSC shall approve the acceptable level for that constituent. DOE shall identify the potential backfill source locations and USEPA shall test each potential backfill source location in accordance with its plan.

For backfill soils from the Santa Susana Field Lab, the relevant Look-up Table shall be for the geologic formation from which the backfill soils were obtained. If

such soils are approved by DTSC as acceptable, they may be used as backfill at any location within Area IV and the NBZ. For backfill soils obtained from outside the Santa Susana Field Lab, the relevant Look-up Table shall be for the formation to which the backfill soils are to be placed.

If an onsite or offsite source of backfill soils that achieves all Look-up Table values cannot be reasonably found, then DTSC, DOE and USEPA shall enter a consultation process and DTSC shall determine the best available source of backfill.